

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. -28. (canceled)

29. (currently amended) A monoclonal antibody that binds to an epitope within a catalytic domain of HAAH, said domain comprising residues 650-700 of SEQ ID NO:2.

30. (canceled)

31. (currently amended) ~~The antibody of claim 29~~ A monoclonal antibody that binds to an epitope of SEQ ID NO:2, wherein said monoclonal antibody is selected from the group consisting of 5C7 produced by hybridoma ATCC designation PTA 3383, 5E9, 19B produced by hybridoma ATCC designation 3384, 48A, 74A, 78A, and 86A produced by hybridoma ATCC designation 3385.

32. (canceled)

33. (currently amended) A composition comprising a monoclonal antibody that binds to an epitope within a catalytic domain of HAAH, said antibody being linked to a cytotoxic agent, wherein said composition agent preferentially kills tumor cells compared to non-tumor cells and wherein said domain comprises residues 650-700 of SEQ ID NO:2.

34. (currently amended) A kit for diagnosis of a tumor in a mammal, comprising a monoclonal antibody that binds to an epitope within a catalytic domain of HAAH, said catalytic domain comprising residues 650-700 of SEQ ID NO:2.

35. (originally filed). The kit of claim 34, wherein said antibody is immobilized on a solid phase.

36. (originally filed). The kit of claim 35, wherein said solid phase is selected from a group consisting of an assay plate, an assay well, a nitrocellulose membrane, a bead, a dipstick, and a component of an elution column.

37.-38. (canceled)

39. (currently amended) ~~The antibody of claim 29~~ A fragment of a monoclonal antibody that binds to an epitope of SEQ ID NO:2, wherein said antibody is a HAAH-binding fragment of FB50 is produced by hybridoma ATCC designation PTA 3386.

40. (currently amended) The antibody of claim 39, wherein said fragment is a ~~FB50~~ Fab or (Fab)₂ fragment.

41. (currently amended) The antibody of claim 39, wherein said antibody is a ~~FB50~~ single chain Fv molecule.

42. (previously presented) The antibody of claim 29, wherein said antibody is a single chain Fv molecule.

43. (previously presented) The antibody of claim 29, wherein said epitope is on the surface of a cell

44. (canceled)

45. (currently amended) The A composition of claim 33 comprising, ~~wherein said antibody is a HAAH-binding~~ a fragment of ~~FB50~~ an antibody produced by hybridoma ATCC designation PTA3386, said fragment being linked to a cytotoxic agent.

46. (currently amended) The composition of claim 33 45, wherein said ~~antibody~~ fragment is a ~~FB50~~ Fab or (Fab)₂ fragment.

47. (currently amended) The composition of claim 33 45, wherein said ~~antibody~~ fragment is a single chain Fv molecule.

48.-50. (canceled)

51. (previously presented) The composition of claim 33, wherein said cytotoxic agent is ricin.

52. (currently amended) The composition of claim 33, wherein said cytotoxic agent is ~~diphtheria~~ diphtheria toxin.

53. (canceled)

54. (currently amended) The kit of claim 34, wherein said antibody is a ~~FB50~~ Fab or (Fab)₂ fragment.

55. (canceled)

56. (presently presented) The kit of claim 34, wherein said antibody is a single chain Fv molecule.

57.-58. (canceled)